

WHAT IS CLAIMED IS:

1. An amorphous metal core transformer comprising, a plurality of wound magnetic cores composed of amorphous metal strips, and

a plurality of coils, each of said coils including a primary coil and a secondary coil, each of said coils further including a bobbin, wherein

said primary coil employs different material from that of said secondary coil, and said bobbin has higher strength than that of said amorphous metal strips.

2. An amorphous metal core transformer according to claim 1, wherein,

said primary coil is composed of copper conductor coil, said secondary coil is composed of aluminum conductor coil, and said secondary coil is disposed outside said primary coil in radius direction of said coil.

3. An amorphous metal core transformer according to claim 2, wherein,

current density calibrated by electrical resistance of said primary coil is higher than that of said secondary coil.

4. An amorphous metal core transformer according to claim 2, wherein,

said secondary coil has a greater length than the primary coil in the axial direction thereof.

5. An amorphous metal core transformer according to claim 3, wherein said secondary coil has a greater length than the primary coil in the axial direction thereof.

6. An amorphous metal core transformer according to claim 1, wherein,

said primary coil employs a rectangular copper wire, and said secondary coil employs an aluminum strip.

7. An amorphous metal core transformer according to one of claim 1, further comprising a casing for containing said magnetic cores and said coils, said casing being filled with an insulative cooling medium, said casing having cooling fins formed so as to project from a surface of said casing, wherein,

said cooling fins project from said surface of said casing from 17 mm to 280 mm in height, and the total surface area of said cooling fins and said casing is  $130 \text{ m}^2$  or less.

8. An amorphous metal core transformer according to claim 1, wherein,

four pieces of said wound magnetic cores and three pieces of coils are assembled so as to compose a three phase transformer having five-legged magnetic cores.

9. An amorphous metal core transformer according to claim 8, wherein,

said three phase transformer has a capacity of 750 kVA or more and said three coils are connected in  $\Delta$ - $\Delta$  connection system.